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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,101	07/07/2004	Manfred Angermayr	2001P14008WOUS	5587

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EXAMINER	
CHRISS, ANDREW W	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/501,101	ANGERMAYR ET AL.	
	Examiner	Art Unit	
	Andrew Chriss	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 July 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment, filed November 21, 2007, has been entered and carefully considered.

2. In light of Applicant's amendment to Claims 21 and 22, rejection of said claims under 35 U.S.C. 112, second paragraph, is withdrawn.

Claim Objections

3. **Claims 21, 30, and 31** objected to because of the following informalities: The amended claim language "the another network node" is awkward. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. **Claims 29, 30, and 39** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Assignment of internal logical networks to a pair by a table or mathematical algorithm is claimed. It is unclear based on the specification how a mathematical algorithm would be used in such a capacity. Further, it is unclear whether Claims 29 and 39 contain an alternative limitation. For examination purposes, Examiner assumes that both claims contain alternative limitations. For proper wording of alternative limitations, see *MPEP 2173.05(h)*.

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. **Claims 21-24, 28 and 29** rejected under 35 U.S.C. 102(e) as being anticipated by Rose (United States Patent Application Publication US 2001/0002194 A1).

Regarding Claim 21, Rose teaches a node as part of a distributed signalling exchange in a telecommunications network in Figure 5. Each node is comprised of multiple trunk routes, equivalent to Applicant's claimed internal networks. Figure 5 further shows signalling connections between multiple nodes in the distributed exchange. Additionally, the nodes utilize the same signalling point codes (denoted as 'X' and 'Y' in the figure).

Regarding Claim 22, Rose teaches that the node comprising multiple internal networks utilizes multiple signalling point codes (Figure 5), thus a second internal logical network would have a code distinct from that assigned to the network node.

Regarding Claim 23, Rose teaches that distributed exchange contains nodes which each have signalling connections set up with other nodes in the telecommunications network. Specifically, Node p in Figure 6 has a signalling connection established with Exchange A via Signalling Link Set A-X. If that route is not available for signalling, Exchange A communicates with Exchange B, which will forward the signalling request back to the distributed signalling exchange via another trunk route (paragraph 0085).

Regarding Claim 24, Rose teaches the network a signalling link set failing and diverting signalling messages via another exchange in the network. When an exchange receives a

signalling message indicating an alternate signalling link set is being used, it realizes the link has failed (paragraph 0085).

Regarding Claim 28, Rose teaches each node in the exchange contains pairs of trunk routes, thus a pair of internal logical networks (Figure 5). Pairs of trunk routes are further set up in other nodes in the distributed exchange in a similar manner.

Regarding Claim 29, Rose teaches the trunk routes are assigned by data tables (paragraph 0085).

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. **Claim 25** rejected under 35 U.S.C. 103(a) as being unpatentable over Rose in view of Okanoue et al (United States Patent 6,122,268), hereinafter Okanoue. Rose teaches all of the limitations of Claim 21, as described above. However, Rose does not teach answering routeset test messages sent to the second internal logical network with routing information from the first logical internal logical network. In the same field of endeavor, Okanoue teaches utilizing proxy address resolution protocol (ARP) messaging (column 5, line 51 – column 6, line 22), with functionality similar to that found in the instant invention. Specifically, a node that wants to transfer a packet to a host broadcasts a message requesting the link layer address corresponding to the geographical identifier of that host. In applying proxy ARP, the foreign agent (FA) receives the request for the link layer address and, instead of transferring the address of the destination host, transmits its own link layer address. Thus, a network node coupled to one

logical network of another network node receives routing information from another logical network. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the properties of the proxy ARP protocol taught in Okanoue with Rose in order to allocate geographical identifiers to plural movable hosts in a sub network.

10. **Claims 26 and 27** rejected under 35 U.S.C. 103(a) as being unpatentable over Rose in view of Havansi (United States Patent 5,930,236).

Regarding Claim 26, Rose teaches all of the limitations of Claim 21, as described above. However, Rose does not teach sending overload messages arriving a first internal logical network to a network node coupled to a second internal logical network. In the same field of endeavor, Havansi teaches a transfer-prohibited (TFP) message, equivalent to Applicant's claimed overload message, which is used to test routes between signalling nodes (column 5, line 66 – column 6, line 44). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the overload message taught in Havansi with the multiple internal networks taught in Rose in order to maintain availability of nodes during a circular rerouting event.

Regarding Claim 27, Havansi further teaches blocking the sending of the TFP message so as not to cause oscillation in the system (column 6, lines 33-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Havansi with Rose in order to maintain availability of nodes during a circular rerouting event.

11. **Claim 30** rejected under 35 U.S.C. 103(a) as being unpatentable over Rose in view of Segal (United States Patent 5,737,404) and Doshi et al (United States Patent 6,529,499), hereinafter Doshi. Rose teaches all of the limitations of Claim 21 above. However, Rose does not teach setting up a third internal logical network where a second signalling connection exists to another network node in the same manner as the second internal logical network. In the same field of endeavor, Segal teaches multiple internal networks (via multiple network interface cards), with each internal network connected in the same manner (via Ethernet interfaces) to another network node (Figure 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Segal with Rose in order to provide an expandable modular distributed architecture that includes a method of MTPL3 level redundancy. However, the aforementioned references do not teach assigning messages for forwarding via a mathematical algorithm. In the same field of endeavor, Doshi teaches a weighted routing algorithm which is used to determine a routing path for forwarding a packet (column 5, lines 37-41). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the mathematical forwarding algorithm taught in Doshi with the multiple internal networks taught in Rose, as modified above, in order to provide quality of service guarantees for acceptable delay and jitter characteristics without the need to directly signal the individual routes over which an IP network path is established.

12. **Claims 31-34, 38, and 39** rejected under 35 U.S.C. 103(a) as being unpatentable over Gavaras et al (United States Patent 5,048,081), hereinafter Gavaras, in view of Rose.

Regarding Claim 31, Gavaras teaches a method of adding a new exchange (network node) to a telecommunications network (Abstract). However, Gavaras does not teach setting up two internal logical networks, setting up a signalling connection from one of the internal logical networks to another network node, and handling all signalling of the other network node, wherein both network nodes have the same signalling point code. In the same field of endeavor, Rose teaches the above limitations, as described with regards to Claim 21 above. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Rose with Gavaras in order to provide a distributed signalling exchange resilient to failures or local problems at any one of the exchange nodes.

Regarding Claim 32, Gavaras teaches a method of adding a new node to a telecommunications network, as described with regards to Claim 31 above. Further, Gavaras teaches that the point code originally assigned to another exchange is assigned to the added exchange (column 5, lines 8-16), thus the code was already known by the other network node. However, Gavaras does not teach adding a network node with multiple internal networks. In the same field of endeavor, Rose teaches a network node containing multiple internal networks, as described with regards to Claim 21 above. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the signalling node taught in Rose with node addition method taught in Gavaras in order to provide a distributed signalling exchange resilient to failures or local problems at any one of the exchange nodes.

Regarding Claim 33, Rose further teaches the claimed signalling arrangement, as described with regards to Claim 23 above. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the signalling arrangement taught in Rose with*

node addition method taught in Gavaras in order to provide a distributed signalling exchange resilient to failures or local problems at any one of the exchange nodes.

Regarding Claim 34, Rose further teaches sending messages indicating that a destination in the first internal logical network has failed, as described with regards to Claim 24 above. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Rose with Gavaras in order to provide a distributed signalling exchange resilient to failures or local problems at any one of the exchange nodes.

Regarding Claim 38, Rose further teaches forming pairs of internal logical networks, as described with regards to Claim 28 above. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Rose with Gavaras in order to provide a distributed signalling exchange resilient to failures or local problems at any one of the exchange nodes.

Regarding Claim 39, Rose further teaches assigning internal logical networks via data tables, as described with regards to Claim 29 above. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Rose with Gavaras in order to provide a distributed signalling exchange resilient to failures or local problems at any one of the exchange nodes.

13. **Claim 35** rejected under 35 U.S.C. 103(a) as being unpatentable over Gavaras in view of Rose, as applied to Claim 31 above, and further in view of Okanoue. Gavaras and Rose teach all of the limitations of Claim 31, as described above. However, the references do not teach answering routeset test messages sent to the second internal logical network with routing

information from the first logical internal logical network. In the same field of endeavor, Okanoue teaches proxy ARP messaging, as discussed with regards to Claim 25 above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the properties of the proxy ARP protocol taught in Okanoue with Rose in order to allocate geographical identifiers to plural movable hosts in a sub network.

14. **Claims 36 and 37** rejected under 35 U.S.C. 103(a) as being unpatentable over Gavaras in view of Rose, as applied to Claim 31 above, and further in view of Havansi.

Regarding Claim 36, Gavaras and Rose teach all of the limitations of Claim 31, as described above. However, the references do not teach sending overload messages arriving a first internal logical network to a network node coupled to a second internal logical network. In the same field of endeavor, Havansi teaches a transfer-prohibited (TFP) message, equivalent to Applicant's claimed overload message, which is used to test routes between signalling nodes (column 5, line 66 – column 6, line 44). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the overload message taught in Havansi with the multiple internal networks taught in Rose in order to maintain availability of nodes during a circular rerouting event.

Regarding Claim 37, Havansi further teaches blocking the sending of the TFP message so as not to cause oscillation in the system (column 6, lines 33-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Havansi with Rose in order to maintain availability of nodes during a circular rerouting event. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Havansi with

Gavaras, as modified above, in order to maintain availability of nodes during a circular rerouting event.

15. **Claim 40** rejected under 35 U.S.C. 103(a) as being unpatentable over Gavaras in view of Rose, as applied to Claim 31 above, and further in view of Segal and Doshi. Gavaras and Rose teach all of the limitations of Claim 31, as described above. However, the references do not teach setting up a third internal logical network where a second signalling connection exists to another network node in the same manner as the second internal logical network. In the same field of endeavor, Segal teaches multiple internal networks (via multiple network interface cards), with each internal network connected in the same manner (via Ethernet interfaces) to another network node (Figure 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Segal with Gavaras, as modified above, in order to provide an expandable modular distributed architecture that includes a method of MTPL3 level redundancy. However, the aforementioned references do not teach assigning messages for forwarding via a mathematical algorithm. In the same field of endeavor, Doshi teaches a weighted routing algorithm which is used to determine a routing path for forwarding a packet (column 5, lines 37-41). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the mathematical forwarding algorithm taught in Doshi with the multiple internal networks taught in Gavaras, as modified above, in order to provide quality of service guarantees for acceptable delay and jitter characteristics without the need to directly signal the individual routes over which an IP network path is established.

Response to Arguments

16. Applicant's arguments filed November 21, 2007 regarding rejection of **Claims 21-24 and 28-29** under 35 U.S.C. 102(e) have been fully considered but they are not persuasive. Applicant states that Rose fails to disclose the claimed limitation of setting up a signaling connection from the second internal network to another network node of the telecommunication network, via which signaling connection all signaling of the another network node is done, wherein both network nodes share the same signaling point code. However, Rose discloses multiple nodes in a distributed signaling exchange, wherein each node comprises multiple trunk routes (Figure 5), thus equivalent to Applicant's claimed internal logical networks. As shown in Figure 5, the trunk routes connect the nodes of the distributed exchange to neighboring exchanges as well as to other nodes *within* the distributed signaling exchange (emphasis added). Additionally, each of the nodes within the distributed signaling exchange maintain data tables that allow it to send signaling messages to other nodes in the exchange (paragraph 0085), therefore supporting signaling of the other nodes. Further, the signaling point codes (X, Y) are shared by nodes within the distributed exchange (Figure 5). Therefore, rejection of Claims 21-24 and 28-29 under 35 U.S.C. 102(e) is maintained.

17. Applicant's arguments filed November 21, 2007 regarding rejection of **Claims 25-27, 30-34, and 38-40** under 35 U.S.C. 103(a) have been fully considered but they are not persuasive. Applicant states the various combinations of Rose, Okanoue, Havansi, Segal, Doshi, and Gavaras fail to disclose the claimed features for the same reasons as Applicant's statements with regards to independent Claim 21 above. However, as discussed above, Rose discloses all of the

claimed features of independent Claim 21. Therefore, rejection of Claims 25-27, 30-34, and 38-40 under 35 U.S.C. 103(a) is maintained.

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Chriss whose telephone number is 571-272-1774. The examiner can normally be reached on Monday - Friday, 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrew Chriss
Examiner
Art Unit 2619

AC

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